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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,367	06/13/2002	Christian Marzolin	215140US0PCT	9256

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EXAMINER

CHEVALIER, ALICIA ANN

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 03/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/926,367

Applicant(s)

MARZOLIN ET AL.

Examiner

Alicia Chevalier

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-64 is/are pending in the application.
- 4a) Of the above claim(s) 19-26,32-60 and 64 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18,27-31 and 61-63 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **RESPONSE TO AMENDMENT**

### ***Request for Continued Examination***

1. The Request for Continued Examination (RCE) under 37 CFR 1.53 (d) filed on September 30, 2004 is acceptable and a RCE has been established. An action on the RCE follows.
2. Upon further consideration in view of Applicant's arguments in the response to the election of species requirement, filed January 7, 2005, the restriction in the Office Action mailed December 27, 2004 *only* is withdrawn. The election/restriction requirements the Office Actions mailed August 21, 2003 and July 23, 2004 are still maintained.
3. Claims 1-64 are pending in the application, claims 19-26, 32-60 and 64 are withdrawn from consideration.

### ***WITHDRAWN REJECTIONS***

4. The 35 U.S.C. §102 rejection of claims 1-18, 27-31 and 61-63 over Azzopardi et al. (French Patent No. 2,756,276) made of record in paper #14, pages 7-9, paragraph #7 and the office action mailed July 23, 2004, pages 3-4, paragraph #8 has been withdrawn due to Applicant's arguments filed August 26, 2004.

### ***REJECTIONS***

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 112***

6. Claims 1-18, 27-31 and 61-61 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase “said low surface level and said high surface level being separated by a height not less than 1/10 of the dimensions of a plurality of motifs forming said high level” in claim 1 is unclear and renders the claim vague and indefinite. It is unclear which dimension of the plurality of motifs the height must not be less than 1/10 of.

***Claim Rejections - 35 USC § 102***

7. Claims 1, 3-8, 10-15, 27-31 and 61-63 are rejected under 35 U.S.C. 102(b) as being anticipated by Dettre et al. (U.S. Patent No. 3,354,022).

Dettre discloses a water repellent solid surface (*col. 1, line 23*).

Regarding Applicant’s claim 1, Dettre discloses a substrate (*solid surface, col. 3, line 68*) comprising a relief that consists of a low surface level (*low portions, col. 3, line 69*) and a high surface level (*high portions, col. 3, lines 68-69*). The low surface level and the high surface level being separated by a height not less than 1/10 of the dimensions of a plurality of motifs forming the high level, since the reference discloses that the height of the columns are at least .5 times the distance between adjacent columns (*col. 4, lines 19-21*). Therefore, the height of the motif, i.e. column, is not less than ½ of the dimension, i.e. distance between motifs. The high surface level represents 1 to 65% of the surface of the substrate, since the reference discloses that the low

Art Unit: 1772

portions are at least 60% of the total surface area (*col. 3, lines 69-70*), i.e. the high portions occupy 40% or less of the total surface area.

Regarding Applicant's claim 3, Dettre discloses that the substrate is hydrophilic/oleophilic, since the reference discloses that the surface has improved repellency to both water and oil (*col. 14, lines 38-41*).

Regarding Applicant's claims 4 and 61, Dettre discloses that the height ranges between 0.01 and 10 micrometers, more specifically 1 to 10 micrometers, since the discloses that the height of the columns is at least .5 times the distance between adjacent high portions (*col. 4, lines 19-21*) and the distance between adjacent high portions is about 250 microns or less (*col. 4, line 53*). Thus, the height of the high portions is 125 microns or less, i.e. 0-125 microns.

Regarding Applicant's claims 5 and 6, Dettre discloses that the geometry of the relief can either display periodicity (*col. 4, lines 5-10 and figures 3 and 5*) or not display periodicity (*col. 4, lines 39-43*).

Regarding Applicant's claim 7, Dettre discloses that the low surface level and the high surface level are connected to one another by means of at least one partition approximately perpendicular to a plane of the substrate (*interconnected walls, col. 4, lines 26-30 and figures 5 and 6*).

Regarding Applicant's claim 8, Dettre discloses that the high surface level displays continuity in at least one direction of a plane of the substrate (*figures 3-6*).

Regarding Applicant's claim 10, Dettre discloses that the high surface level does not display continuity in any direction of a plane of the substrate (*col. 4, lines 39-43*).

Art Unit: 1772

Regarding Applicant's claim 11, Dettre discloses that the relief comprises a multiplicity of approximately identical cylindrical craters uniformly distributed on the substrate, a multiplicity of axes of the craters approximately perpendicular to a plane of the substrate (*col. 5, line 73 and col. 4, lines 26-38 and figures 5 and 6*).

Regarding Applicant's claim 12, Dettre discloses that the relief comprises a discrete series of identical or different objects (*col. 4, lines 5-50 and figures 3-6*).

Regarding Applicant's claim 13, Dettre discloses that the discrete series of identical or different objects consists of a plurality of cylinders with axes approximately perpendicular to a plane of the substrate (*figures 3 and 4*).

Regarding Applicant's claim 14, Dettre discloses that the relief comprises a multiplicity of approximately identical cylinders or revolution uniformly distributed on the substrate (*figures 3 and 4*).

Regarding Applicant's claim 15, Dettre discloses that the relief is based on a plastic (*col. 4, line 69 through col. 5, line 10*).

Regarding Applicant's claims 27-31, 62 and 63, the preambles "glazing," "a building trade or street furnishing," "an air, marine or land transportation vehicle," "a screen, a lamp or an electronic display," "a furnishing or household electrical appliance" are deemed to be a statement with regard to the intended use and is not further limiting in so far as the structure of the product is concerned. In article claims, a claimed intended use must result in a ***structural difference*** between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. MPEP § 2111.02.

***Claim Rejections - 35 USC § 103***

8. Claims 2, 9 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dettre as applied above, and further in view of Azzopardi et al. (French Patent No. 2,756,276). For purposes of discussion the English equivalent U.S. Patent No. 6,299,981 is used as the English translation of French Patent No. 2,756,276.

Dettre is relied upon as described above.

Dettre fails to disclose that the substrate has an agent as listed in claim 2, or that the substrate is a conductor of electricity, has anti-reflecting properties or anti-staining properties. Dettre further fails to disclose that the relief has parallelepipedal objects.

Azzopardi teaches a substrate with improved hydrophobic properties (*title*).

Azzopardi '981 discloses an anti-rain glazing (*col. 4, line 6*) comprising a substrate on which irregularities of submicron size have been formed (*col. 2, lines 21-25*). The irregularities form a bumps-and-hollows relief on the substrate (*col. 2, lines 34-35*).

Azzopardi '981 discloses that the substrate either has hydrophobicity/oleophobicity or hydrophilicity/oleophilicity properties (*col. 1, lines 8-9*). The further comprises an agent of a silicone, such as SiO<sub>2</sub> (*col. 3, lines 46-50*) or the formula in column 3, lines 60-67. Furthermore, the substrate is a conductor (*col. 3, lines 8-12*), has anti-reflecting properties, i.e. diffuses light (*col. 2, lines 32-33*), and anti-staining properties (*col. 1, lines 10*).

Azzopardi '981 also discloses the irregularities comprise a multiplicity of approximately identical parallelepipedal objects, such as polyhedras, which are parallel and uniformly spaced (*col. 2, lines 40-56*).

Dettre and Azzopardi are analogous because they both disclose water resistant surfaces, i.e. hydrophobic.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the Azzopardi '981 substrate material as Dettre's substrate materials because of the improved properties gained by Azzopardi '981 substrate material, i.e. anti-reflective and anti-staining properties.

Also, it would have been an obvious matter of design choice to change the shape of the relief, since a modification would have involved a mere change in size of the relief. A change in size or shape is generally recognized as being within the level of ordinary skill in the art, absent unexpected results. MPEP 2144.04 (I) and (IV). Furthermore, Azzopardi '981 shows that parallelepipedal objects are known relieves.

#### ***ANSWERS TO APPLICANT'S ARGUMENTS***

9. Applicant's arguments in the response filed September 30, 2004 regarding the 35 U.S.C. 102 rejections of record have been considered but are moot since the rejections have been withdrawn.

#### ***Conclusion***


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Chevalier whose telephone number is (571) 272-1490. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:00 pm.



Art Unit: 1772

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Alicia Chevalier

3/15/05